



Computer-Aided Design/ Engineering (CAD/CAE) Facility

FEATURES:

- Rapid Prototyping Systems
 - 3D-Systems (SLA)
 - DTM (SLS)
 - Stratasys (FDM)
 - Helisys (LOM)
 - Solidscap (MJP)
- Reverse Engineering
 - Faro/AnthroCam
 - Digibotics
 - Imageware Surfacar
- CAD
 - Solid Works
 - ProE
 - CADD5
 - AutoCad
- CAM
 - CAMWorks
 - DP Tech Espirit
- FEA Analysis
 - ANSYS 5.5
 - Visual Nastran 4D
- ECAD
 - Electronic Design Software
- 35 CAD/CAE Workstations
- Fully Integrated with XFAB Shops

The CAD/CAE facility, operated by a highly-skilled team, provide customers with design, analysis, and prototyping services using state-of-the-art equipment and sound engineering principles. The facility maintains the latest technologies and qualified personnel to execute complex projects covering all aspects of mechanical and interdisciplinary design. Fully integrated with the Experimental Fabrication (XFAB) shops, the CAE Team provides rapid response Concept-to-Product total solutions. They also supply virtual prototyping, rapid prototyping, small-scale production, and much more.



The CAE Team uses sophisticated 3D scanning hardware and software to rapidly generate CAD models from existing items. By evaluating production possibilities and design issues, engineers can help manufacturers avoid development limitations and reduce development time as well as production costs. Advanced rapid prototyping and Computer Aided Manufacturing (CAM) technologies allow the Team to go directly from computer screen to actual working model. A multi-faceted analysis service can conduct several types of examinations including static, dynamic, thermal stress, kinematic motion, and tolerance. In addition, "Virtual Prototypes" can be created to visualize models and assemblies prior to fabrication.

At the CAE facilities, the CAE Team acts as a service bureau to support product teams in the Armed Forces and private industry. CAE is heavily relied upon and particularly active in times of international conflict, such as during Operation Desert Storm. Customers are provided with engineering designs, drafting, and engineering prototypes. The Team supports military missions by developing products needed on short notice. In the commercial arena, manufacturers can take advantage of this capability to have models designed and prototyped with

very rapid cycle time. CAE specialists can predict product attributes early in the development process and recommend the most appropriate design, layout, and production choices. After analyzing an existing model, engineers can help to ascertain and correct problems. The CAE facilities will help manufacturers develop products less expensively by determining and recommending the most economical design.



For additional information on this facility, please E-mail cet@sbccom.apgea.army.mil.

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